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(54) Rotating electrical machine

(57) A rotating electrical machine is proposed which effectively cools a stator and prevents the generation of an eddy current in the stator. A cooling liquid passage (22) extends in a direction parallel with the rotating shaft (2A) of the rotor (2) between an outer peripheral face of the stator cores (4) and an inner peripheral face of the case (1) storing the stator cores (4). The cooling liquid is passed through the cooling liquid passage (22). In this manner, a highly effective cooling results from direct contact of the cooling liquid and the stator cores (4). Furthermore an eddy current is not generated in the stator core (4) as a result of using a cooling liquid having insulating properties.

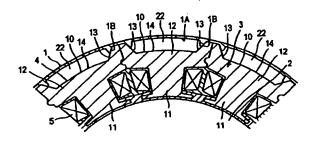




FIG.1

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EUROPEAN SEARCH REPORT

Application Number

EP 01 12 3501

——i	DOCUMENTS CONSIDER Citation of document with indic		Relevant	CLASSIFICATION OF THE
ategory	of relevant passage	s	to claim	APPLICATION (InLCI.7)
Х	US 2 845 551 A (POTTE	R MARION G)	1,2	H02K1/14H02K1/20
^	29 July 1958 (1958-07	-29)		H 1102K1 /14
Y	* figures 1.4 *		3-6	H02K1/14
	* column 5, line 17 -	line 21 *	1	
v	DE 41 03 154 A (UWE U	NTERWASSER ELECTRIC	1,2	
X	GMBH) 6 August 1992 (1992-08-06)	{	}
	* claim 1: figure 2 *	:	i i	1
	* column 2, line 61 -	· line 67 *	1	
v	US 2 247 890 A (REARD	OON ROBERT T)	3,4	
Y	11 1014 1041 (1941-07-	-01)		
	* page 1, line 39 - 1	ine 43; figure 2 *	1	
	·		3,5	
Y	GB 387 961 A (PAUL EI	HKMANN)	3,5	
	16 February 1933 (193 * figures 4,6 *	55-02-10/	}	}
Υ	EP 0 823 771 A. (MATS	USHITA ELECTRIC IND	co 6	
	LITAL 11 February 199	8 (1998-02-11)	i	TECHNICAL FIELDS
	* column 5, line 17	- Time 24; Tigure 4	* }	SEARCHED (Int.Cl.7)
	US 4 764 699 A (NOLD	ROBERT D)	2	H02K
A	16 August 1988 (1988	-08-16)		
l	* abstract; figure 1	*	}	Ì
}	1		3-5	
A	US 3 221 195 A (HOFF 30 November 1965 (19	MANN JACK (1) 65-11-30)	١	1
1	* column 2, line 19	- line 21: figures	1-6	1
ŀ	*	, ,	1	
	-		1	
Ì	\		1	
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	The present search report has i	been drawn up for all claims		
-	Place of search	Date of completion of the se	,	Examiner
3	THE HAGUE	18 December 2		Contr era s 'Sampayo, J
<u> </u>	CATEGORY OF CITED DOCUMENTS	T : theory or	principie underlýin itent document, but	g the invention i published on, or
POFCHM 1508 03.82 (POLCO)	particularly relevant if taken alone	after the t	liling date at cited in the applic	ation
ğ Y.	particularly relevant if combined with and document of the same category	L : documen	t cited for other rea	isons
A:	technological background non-written disclosure	& : member	of the same patent	family, corresponding
p P	intermediate document	documer)i	

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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 01 12 3501

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

18-12-2003

	Patent docume cited in search re		Publication date		Patent fan member(Publication date
US	2845551	A	29-07-1958	NON			
DE	4103154	Α	06-08-1992	DE	4103154	A1	06-08-199
US	2247890	A	01-07-1941	NON		*·	
GB	387961	Α	16-02-1933	GB	389313		16-03-193
				BE	388508		30-06-193
				DE	664532		29-08-1938
				DE	644532	-	07-05-193
				FR	717252		06-01-193
				GB	387622		09-02-193
				US	1959527	Α	22-05-193
ΕP	0823771	Α	11-02-1998	EP	0823771		11-02-1998
				US	6049153		11-04-200
	•			CN	1180457		29-04-199
				WO	9731422		28-08-199
				JP	3417409		16-06-200
				JP	2002238193		23-08-200
				JP	2002209353		26-07-200
				JP	2002199639		12-07-200
				JP	2002209368		26-07-200
				บร	6300700		09-10-200
				บร	6369480		09-04-200
				US	6356001		12-03-2002
				US	2002036438		28-03-200
			· 	US 	2002070619		13-06-200
US	4764699	Α	16-08-1988	EP	0297119	A1	04-01-1989
				JP	1501674		08-06-1989
				WO	8804857		30-06-198
				US	4825531	Α	02-05-1989
US	3221195	Α	30-11-1965	GB	965038	Α	29-07-196

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. 3

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